Research Paper

PERCEIVED CULTURAL CHALLENGES FACED BY WOMEN EMPLOYEES IN IT SECTOR TO PROGRESS IN THEIR CAREER

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Abstract

Malaysian women workforce has been undergoing crisis where the number of female employees become thinner as they climb up the corporate ladder especially in IT sector (TalentCorp-PwC, 2013). In conjunction with this, the objective of this research was set to identify the perceived cultural challenges faced by women employees to progress in their career in IT sector in Malaysia. Five highly mentioned challenges were selected from literature review and cultural models to be investigated. Cultural stereotype (Hofstede, 2010), Gender inequality (Hofstede, 2010), low self-esteem (Instone, Major, & Bunker, 1983), gender gap in mentoring (Universal Integrated Framework, 2007) and family-work life conflict (Voydanoff, P, 2005) are the challenges investigated in this study which are also defined as the independent variables of this research. Whereas, career progress plays a role as the dependent variable. Wide range of literature review, theory and cultural models were analyzed in this research. A new conceptual framework has been derived for this study, to best fit the objective of the research and based on the input from the analysis done on Hofstede Cultural Model (2010) and other cross cultural models. Quantitative research method along with the positivist research paradigm was adopted in this research. Questionnaire was used as an instrument to collect data among 140 female employees from a leading private IT MNC organization located in Cyberjaya, Malaysia. The research was conducted in line with agreed ethics and compliance. Data analysis were conducted using Statistical Package for Social Sciences (SPSS) software version 21. The key result of this paper has meet the objective of this study where all the independent variables seems to have a significant relationship with the career progress of women employees. Perceived cultural challenges from most impacting to least impacting is as followed: Gender gap in mentoring, Low self-esteem, Gender inequality, Family work life conflict and followed by cultural stereotype. More detail analysis were done using correlation and regression analysis and the results are explained well in chapter 4 of this dissertation. Although this dissertation covers the objective of the research precisely, there are some minor limitations such as the sample size of 140 employees may not be very effective because larger samples give a broader picture of the research. As a future recommendation, it is suggested that this research should be conducted among female IT employees from various state in Malaysia so that it covers the culture differences among different geographical area.

Key Terms: Cultural stereotype, Gender inequality, glass ceiling, wage-gap, mentoring gap, family-work conflict, women leadership, career progress.
1. Introduction

Malaysian workforce has been undergoing a significant change and this has resulted in huge leadership transformation where the roles and status of Malaysian women have also gone through a revolution (Ministry of Women and Family Development and UNDP, 2003). As stated by the Ministry of Women and Family Development and UNDP in year 2003, education and career opportunities have made Malaysian women today as well educated, developed and be a part of the top management in many sectors like private and public and even political decision making process in the building and developing of the nation. However, women in Malaysia are not showing up in career world thought they make up half of our country’s population and more than 60% of local university enrolment, but show a labor force participation rate of only 49% (TalentCorp, 2013). Even if they turn up in labor force participation, as we move up the corporate ladder, the number of women shrinks. There for, the main aim of the research is to identify the perceived cultural challenges faced by women in IT industry to reach up to the higher management position in Malaysia. Many policies and initiatives have been undertaken in Malaysia, but closing the gap remains a challenge for many organizations.

Many researches have been conducted in many other countries concerning women participation in workforce and also senior management positions. Research was done in Brazil, explores on the causes of women being underrepresented in senior management and law and corporate governance involved (Alexandre & Angela, 2014). Most of the empirical research on the male-female wage gap concludes that the pay difference is largely related to the fact that women are less likely found in higher paying jobs than men (See Cain, 1986; Blau and Ferber, 1987). It’s been argued that women faced glass ceilings within the organizations that prevent women from advancement to higher job levels (Win Groot & Henriette, 1996). One of the study which looks at the distribution of men and women with regards to the job level, concludes that women have to meet tougher promotion criteria than men (Jones & Makepeace, 1996). However there are very less studies were done and available in Malaysia which speaks about the gender barrier on women in corporate world. Among the minimal number of researches done in Malaysia, a study was conducted on leadership effectiveness of Malaysian managers focusing on the effect of gender (Y.C.Moey, 2008). There was no study done focusing on what are the barriers or glass ceiling of Malaysian women which preventing them from progressing in corporate world especially reaching the top level. A similar study was conducted among women in United States and the findings suggest that 50% of the women leaders perceive barriers that prevent women entering management position (Dean Elmuti & Heather, 2009).

This research topic is essential to be carried out because low presence of women in senior level in corporate world especially in IT sector is proven statistically. Based on the survey conducted by TalentCorp-PwC among the public listed companies in Sept 2013, only 8.6% women make up to the board level, 24% of women in top management position and the rest are employed by male in respective category.
In the era of globalization, economic liberation, fast growing ICT and cyber community, gender imbalance in the ICT industry is existence. There are many researches supports the existence of gender imbalance in the ICT industry (Ahuja, 2002; Baroudi & Igbaria, 1994; Cukier, Shortt, & Devine, 2002; Frenkel, 1991; Moody, Beise, Woszechynski, & Myers, 2003). The idea as ICT is a male dominated industry characterized by masculine language and modes of operation is evident from the literature (The women in Science Engineering and Technology Advisory Group 1995). Proposition of women in the IT related job are relatively low and even if there are, they decide to leave because they feel marginalized and isolated (Trauth, Eileen M, 2006). According to the article released by Parlimen Malaysia (2012), gender equality is a meter for economic development of Malaysia mainly because of the “absent women” who represent “brain drain” in Malaysian workforce. Women are under-utilized and this is a biggest challenge for Malaysia labor force. There are high numbers of talented women stand ready to use their professional expertise in career life but at the same time they are dramatically underrepresented in positions of leadership in this country. The glass ceiling is term originally coined by two Wall Street Journal reporters in 1986 (Hymowitz & Schellhardt, 1986) to refer to the invisible barrier preventing women from ascending into top corporate leadership positions.

Research questions corresponding to objectives are does cultural stereotype impacts women’s career progression? Does gender inequality impacts women’s career progression? Does family work conflict impacts women’s career progression? Does gender gap impacts women’s career progression? Does cultural stereotype impacts women’s career progression?

2. Literature Review

Dean Elmuti, Ph. D et al (2009) carried on a study with the objective to discover the roles of women in leadership positions and test the connection between leadership styles of women to
wards organizational effectiveness. The data collection scale was big, where questionnaire was distributed among 700 randomly selected women from multiple sectors in United States. Likert’s (1967) model of human organizational dimension was used to assess the variables used in this study. Leadership style being the independence variables and organizational effectiveness being the dependent value. Research findings from this study concludes that, women are surveyed to face obstacles which prevents them from entering management positions. The common barriers surveyed are biasness in selection process, workplace relationship, family-life demands, globalization and relocation and life-cycle conflicts. It is cited in many articles that, there is link between barriers such as discrimination, family-life demands, prejudice and stereotyping and women’s advancement to top management in the workplace were statistically significant, confirming prior expectations and complementing previous studies (Baker, 2003; Wellington, et al., 2003; Hewlett, 2002; Helfat, et al., 2006). Win Groot (1996) carried on a study to analyze the glass ceiling or dead end of job promotions among men and women. Data collection method applied was secondary data collection where, existing research findings were utilized. Conclusion of the study was, employers don’t select women for jobs that offers advancement. Researches indicate that, women have less opportunity for promotion in an organization than men. Distribution of men and women with regards to job level shows that, women have to face tough promotion criteria then men (Jones and Makepeace, 1996). Findings of the study conclude that, majority of employers doesn’t select women for jobs that offer advancement. Women are in dead-end jobs which don’t allow possibility of promotions.

Dr Juliet Webster (2007) conducted a study in United Kingdom with the objective of examining the independent variable which is the challenges of diversity in the Information and communication technology (ICT) sector, with particular focus on women, older workers and migrant workers. There is a growing need for skilled employees in ICT sector which is a pushing factor for diversity in ICT. Despite achieving well in mathematics, science, and technology subjects at school, women do not go on to enter ICT work in large numbers (George 2003). Research concludes that women and girls have little awareness of the potential variety of ICT work, particularly its applied aspects (Valenduc et al 2004; Webster 2006). Dr Juliet’s studies itself suggest that, equality has not been always sufficient for women in workplace neither numerically or in seniority. Women seem to be not quick enough accept and respond to the challenges offered by the employers. There for the legacy of women being under-represented in ICT field remains. A handful of studies has been carried out in Malaysia in relates to gender, leadership and management. Some among those studies have been reviewed in this thesis to be a guideline. Noor Rahamah (2012) carried out a survey in Malaysia from management sector and the objective was to investigate the representation rate of Malaysian women in management and analyze the underlying obstacles in their career progress. Research methodology applied was macro (library research) and micro studies (secondary data) done among 12 families. Science and engineering are fields are where women’s are severely under represented. Conclusion from this studies shows that, lack of organizational political awareness among women is the major barrier preventing women from succeeding in corporate life.

Indra Devi (2013) researched to investigate the association between women manager’s career progression in Government linked Companies (GLC) against family related variables, negative stereotype, glass ceiling, talent management in Malaysia. Methodology used was quantitative approach and the Independent variables of these study is the “barriers” and it was achieved by distributing questionnaires. Attributes related to success, decision making capabilities, management skills which are necessary for a leader are commonly described to men (Lyness and Heilman, 2006). The study concludes there is direct relationship between the two variables. A study in Zimbabwe was conducted by Alice Zinyemba in year 2013; the Research objective is to discourse on the impact of culture and gender on women in management and leadership positions. Quantitative methodology studies were conducted, by distributing questionnaires to 60 women in hospitality and financial services field. Research has shown that gender is one of the important criteria that determined an employee’s position at the work place (Adler, 1994, Priola, 2004). This research concludes that the challenges that the participants faced were mostly prejudices, discrimination, insufficient time and demanding responsibilities. This
research also proves the existence of gender imbalance at management level especially in the hospitality industry.

2.1 Critical Review of Key Theories

Organization is mainly driven by human capital which functions as an engine that drive the organizational functions. When an organization progress forward, proposition of people grew and it requires theme to manage and run other factors of production. This means that individuals are likely to be drawn from different 'sources' such as geographical, social cultural and political. They also perceived to have inevitable differences in ethnicity, religion, race, gender, size, personalities, physical abilities, age, and sexual orientation (global perspective) (Mazur, 2010). Diversity management has been defined as "enabling every member of work force to perform to his or her potential" (R. R. Thomas, 1990). Miss managed diversity can cause obstacle for organization's progress and there for diversity is perceived as "double-edge sword" (Storey, S, 2014). According to (Omkar and Josiah, 2015), diversity elements gender and ethnicity has a significant positive impact on employees' satisfaction. According to Hofstede (1980, there are many cultural related issues which holds back a women from participating in top management and these issue are closely related to view of the society on a female and male. The term "glass ceiling" is a term originally coined by two Wall Street Journal reporters in 1986 (Hymowitz & Schellhardt, 1986) to refer to the invisible barrier preventing women from ascending into top corporate leadership positions.

Many studies highlights that having both family and career can affect the women's performance and career growth (Voydanoff, 2004). There are many organization who are reluctant to employ or sustain working mothers (Gatrell, 2005). Mothers are perceived to be less performing and less motivated due to their family obligations (Voydanoff, 2004). Due to this they receive less promotion, opportunity and less pay (Keene and Reynolds, 2005). House hold and other care related commitments such as child care, cleaning service, day care and marketing has been found as being even more sex-based with women doing the majority (Bennetts, 2007). Working women basically have to juggle roles between a mother, housewives, home-makers and managers at work. This become a great challenge for them to balance their role and progress at work and also manages the family with minimum family-work conflict (Clark, 2000). Handling family-work conflict is very difficult for women with young children especially when they try to balance their role as the primary caregiver at family and with additional responsibility at work (Lopez-Claros and Zahidi, 2005).

Research on career mentoring may be another element to be looked at when comes to women's career path and progress. In a research paper, “Gender in Mentoring Relationships,” Ragins, 1999) argued that gender is a consideration in adult-adult mentoring relationships because females, as a group, have less power and confront more sexism than males and, consequently, female mentees might be perceived as needing more protection than male mentees. Studies and research on gender differences in career mentoring are very few. Nonetheless, several studies have shown that male mentors tend to provide more instrumental and technical career support, whereas female mentorships are more often characterized by a greater degree of emotional support (Ragins, 1999).

Self-esteem of women plays a high role in her career progression and promotion especially in male dominated filed like science and technology. Low self-esteem can severely limit the performance of a women and her career development. Unstable self-esteem can cause women to look fragile, vulnerable feelings of immediate self-worth that are influenced by perceived self-relevant events that are either externally provided such as compliment or insult (Kernis, Grannemann, & Barclay, 1989).

Women are underestimated as less talented to be a lead and this is what known as Gender Stereotype. In other words, stereotypes refer to thoughts about a social group; which may not correspond to reality (Matlin, 2008, p. 37). Women in our society are commonly nurturing, likeable, affectionate, soft-spoken, warm, selfless, gentle and compassionate rather ambitious, aggressive, dominant, strong, individualistic and independent (Butler, 1976). There for,
according to the stereotype, the characteristics of women are opposite to what is required to be a leader (Klenke, K, 1996). This further supported by Koenig et al. (2011) meta-analysis of the "think managers, think male" association also revealed some factors that moderated the strength of the diversity. In addition, Robertson, Brummel, & Salvaggio (2011) studied the gender-based perceptions of different areas for managerial positions. The main purpose of their study was to see if there is a major difference in the way men and women rated in their competency as a leader. The results showed that in all areas, the male character was favored over the female character for both options (Robertson, et al., 2011, p. 24). This type of perception causes women to be marginalized when come to promotion and appraisal.

Despite achieving well in academic in science and technology subjects at school, women are still poorly represented in ICT filed. Women have been noticeably under-represented in ICT work, particularly at senior levels (Cockburn 1985; Gaio 1995; Webster 1997). Globally, women representation in ICT work lags behind in the labor market. In Australia and the US, they make up only around 20% of ICT employees (Eurostat, 2007). The gender pay gap is another concern when comes to unequal treatment of women at labor force especially in ICT industry. Recent survey conducted in UK ICT sector shows that, comparisons of women and men’s pay gap is of 20% (Glover, 2007). There is another phenomena found by a researcher called motherhood wage gap (Avellar & Smock, 2003; Crittenden, 2001). This indicates that not only women earns lesser then man but mothers do earn lesser then non-mothers even if they are put to perform similar task. As a whole, women employees also faces unequal treatments when comes to hiring process, job promotions, rewards and recognition. The obstacles going through narrow line was illustrated in the reaction to a recent report in the Harvard Business Review (Flynn, Heath, & Holt, 2011). Based on the literature reviewed, a new conceptual model has been formed to support this research on this matter. The challenges then classified into two groups where the external factors related to the organization and management system and internal factors refers to the individual and their surroundings.

Figure 2.3.1: Proposed Conceptual framework of perceived cultural challenges among women employees in IT sector.
3. Research Design and Methodology

Research type or research design is the strategy chosen to compile all the component of the studies in a coherent way so that the research problem is effectively addressed (De Vaus, 2006). There are three types of notable research types which are exploratory, descriptive and explanatory. In this thesis, explanatory study type is chosen because this research is about the cultural challenges which act as a barrier for women to progress in career. Therefor, challenge is the independent variable which impacts the career progression which is considered a dependent variable here. Research method refers to the technique or procedure applied to identify, select and analyses the data and enable the readers to understand the value and result of the research (De Vaus, 2006). There are two type of research techniques exist which is quantitative and qualitative which will be selected based upon each research objective. In this case study, quantitative technique is selected since the proposition of each type of challenges faced by women us measurable numerically. This variables are measureable and convertible into a numerical data and then later able to analyze statistically.

Data collection method can be categorized in two main type of data collection method such as empirical and non-empirical studies which is applied according to the needs and nature of a study. However, in this thesis, empirical research method is chosen because the research objective is related to cultural studies which is more suitable to be a first-hand studies. In line with the objective of the study which is to identify the Cultural challenges faced by women employees in IT sector is a empirical or factual (tangible world of people, objects and events). In this thesis, supervised self-administered questionnaire method is applied. 150 potential female employees (respondents) were approached and physical questionnaire was distributed to them. They were given enough time to answer and the questionnaire was collected in person. By this way, we can ensure that the input if from the chosen respondent and data integrity, reliability is ensured. In this research I have chosen the below sampling size and technique explained in the table below.

<table>
<thead>
<tr>
<th>Sample size</th>
<th>140 female from IT corporate industry (irrespective of race, religion, age and marital status)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population</td>
<td>Overall female employees in IT sector in Malaysia.</td>
</tr>
<tr>
<td>Sampling technique</td>
<td>Convenience sampling</td>
</tr>
<tr>
<td>Reason for sample size</td>
<td>140 female employee is a manageable size of sample compared to the number of total female employees in the organization. Female employees from managerial and non-managerial group were carefully selected for questionnaire distribution.</td>
</tr>
</tbody>
</table>

Table 3.6.1: Sampling details

The data collected from questionnaire distribution, will be analyzed using Statistical Package for Social Sciences (SPSS) software. SPSS is able to generate multiple statistical values such as mean, standard deviation, percentage and much more useful mathematical representation of the variables discussed. This will ease the data analysis phase of this study.

3.1 Theoretical framework

Based on the review done in chapter 1 and research of literature review done in chapter 2, a theorized relationship is formed. This theorized relationship between the variables involved is the hypothesis formed at the beginning level of a research. In this research, there are five hypothesis identified to be tested at the end of the research.
**H1**: Cultural stereotype has a direct relationship and significant impact on women’s career progression.

**H2**: Gender inequality has a direct relationship and significant impacts on women’s career progression.

**H3**: Family work conflict has a direct relationship and significant impacts on women’s career progression.

**H4**: Low self-esteem among women has a direct relationship and significant impacts on women’s career progression.

**H5**: Gender gap in mentoring has a direct relationship and significant impact on women’s career progression.

4. **Results and Discussion**

In this chapter of this research paper, data collected from questionnaire distribution will be analyzed using SPSS statistic software to test five hypotheses as below to test the perception among the female employees in IT sector.

- **H1**: Cultural stereotype has a direct relationship and significant impact on women’s career progression.
- **H2**: Gender inequality has a direct relationship and significant impacts on women’s career progression.
- **H3**: Family work conflict has a direct relationship and significant impacts on women’s career progression.
- **H4**: Low self-esteem among women has a direct relationship and significant impacts on women’s career progression.
- **H5**: Gender gap in mentoring has a direct relationship and significant impact on women’s career progression.

There are four types of analysis have been applied in this research paper.

- Descriptive Analysis
- Frequency Analysis
- Correlation Analysis
- Regression Analysis

There are 5 independent variables and 1 dependent variables used in this research study.

- **Independent variables**:
  - Cultural stereotypes (**Stereotype_MEAN**)
  - Gender inequality (**Gender_Inequality_MEAN**)
  - Gender gap in mentoring (**Mentoring_Gap_MEAN**)
  - Low self-esteem (**Self_Esteem_MEAN**)
  - Family work life conflict (**Family_Conflict_MEAN**)

- **Dependent variable**:
  - Career progress among female employees (**Progress_MEAN**)

4.1 **Descriptive Analysis**
Table 4.1_1: Descriptive Statistics

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
<th>Std. Deviation</th>
<th>Variance</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mentoring Gap MEAN</td>
<td>140</td>
<td>2.40</td>
<td>4.00</td>
<td>3.103</td>
<td>.1844</td>
<td>.033</td>
</tr>
<tr>
<td>Gender Inequality MEAN</td>
<td>140</td>
<td>2.40</td>
<td>4.00</td>
<td>3.103</td>
<td>.1844</td>
<td>.033</td>
</tr>
<tr>
<td>Mentoring Gap MEAN</td>
<td>140</td>
<td>2.40</td>
<td>4.00</td>
<td>3.103</td>
<td>.1844</td>
<td>.033</td>
</tr>
<tr>
<td>Self Esteem MEAN</td>
<td>140</td>
<td>2.40</td>
<td>4.00</td>
<td>3.103</td>
<td>.1844</td>
<td>.033</td>
</tr>
<tr>
<td>Family Conflict MEAN</td>
<td>140</td>
<td>2.40</td>
<td>4.00</td>
<td>3.103</td>
<td>.1844</td>
<td>.033</td>
</tr>
<tr>
<td>Progress MEAN</td>
<td>140</td>
<td>2.40</td>
<td>4.00</td>
<td>3.103</td>
<td>.1844</td>
<td>.033</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>140</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Graph 4.1_1: Descriptive Statistics

For this research, descriptive statistic is used to analyze the MEAN and STANDARD DEVIATION of the data involved. Mean value is the most appropriate value to use to make comparison. Among the five independent variable impacting women’s career progress, the mean value of mentoring-gap MEAN is the highest value (MEAN= 4.42| std.Dev=0.13) among all. This means that, women’s in IT sector feels that they need more closer mentoring to be able to perform better in their job and further progress themselves. The Second highest mean value is scored by the Stereotype MEAN (MEAN= 4.31| std.Dev=0.18). It shows that many employee’s do second the perception that stereotype is visible in their environment. The third highest value is, self-esteem (MEAN= 3.90| std.Dev=0.10), majority of the staffs are having low self-esteem thus not able to push themselves to deliver an outstanding performance so that they get promoted to next level. For the other remaining variables it follows the sequence as below, Family Conflict MEAN (MEAN= 2.63| std.Dev=0.18) and lastly Gender Inequality MEAN (MEAN= 2.50| std.Dev=0.10). MEAN value is the most suitable to measure the ration value of a set of data to represent which variables has the most and least preferable among the data set (Thompson, 2009).

4.3 Frequency Analysis

Frequency analysis was done based on the participant demographics data collected among 140 female respondents. Age, Race, Job Position or designation, Marital Status, Number of kids, Education level and Experience in IT industry are the demographic details which was successfully collected. Tables below presenting the frequencies of each category respectively.
Out of 140 respondents, 55.7% of them were from young age group which is 21-30 which includes the fresh graduates and collage leavers, where as 30.7% from middle age group where most of them are married and with family commitments. Lastly, 13.6% of them are from above 41 years and above. This pattern supports the perception that, as the age group increases, the number of female employees in IT sector seems to be lesser.

### Table 4.3.1: Frequency by Age

<table>
<thead>
<tr>
<th>Age</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>140</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>21-30</td>
<td>79</td>
<td>55.7</td>
<td>55.7</td>
<td>55.7</td>
</tr>
<tr>
<td>31-40</td>
<td>43</td>
<td>30.7</td>
<td>30.7</td>
<td>86.4</td>
</tr>
<tr>
<td>41-above</td>
<td>19</td>
<td>13.6</td>
<td>13.6</td>
<td>100.0</td>
</tr>
</tbody>
</table>

As displayed in above table, 44.3% of respondents are single, 54.3% are married with family commitments and 1.4% of them are divorcee who can be single mothers with or without kids. Anyhow, majority of the respondents are those who with family commitments.

### Table 4.3.2: Frequency by Marital_Status

<table>
<thead>
<tr>
<th>Marital_Status</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>140</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Single</td>
<td>62</td>
<td>44.3</td>
<td>44.3</td>
<td>44.3</td>
</tr>
<tr>
<td>Married</td>
<td>76</td>
<td>54.3</td>
<td>54.3</td>
<td>98.6</td>
</tr>
<tr>
<td>Divorced</td>
<td>2</td>
<td>1.4</td>
<td>1.4</td>
<td>100.0</td>
</tr>
</tbody>
</table>

Out of 140 female respondent, 61.4% are ladies with no children, rest of the 38.6% of them have 1 to 3 kids or more. The result of the study shows both women with or without kids have the same perception when comes to challenges in IT industry because women are the main the care takers of family members even if they do not have children.

### Table 4.3.4: Frequency by Number of Kids

<table>
<thead>
<tr>
<th>Num_Kids</th>
<th>Frequency</th>
<th>Percent</th>
<th>Valid Percent</th>
<th>Cumulative Percent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valid</td>
<td>140</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>86</td>
<td>61.4</td>
<td>61.4</td>
<td>61.4</td>
</tr>
<tr>
<td>1</td>
<td>18</td>
<td>12.9</td>
<td>12.9</td>
<td>74.3</td>
</tr>
<tr>
<td>2</td>
<td>29</td>
<td>20.7</td>
<td>20.7</td>
<td>95.0</td>
</tr>
<tr>
<td>3</td>
<td>7</td>
<td>5.0</td>
<td>5.0</td>
<td>100.0</td>
</tr>
</tbody>
</table>
**Table 4.3.4: Frequency by Number of Kids**

Based on above table, "Analyst" is the beginner level of position in IT sector followed by Senior Analyst, Advisor, Senior advisor, manager 1 and 2. This supports the perception that, as we go up the corporate ladder, the number of female employees reduces.

**Table 4.3.6: Frequency by Education Level**

Above table shows that, majority of the women employee in IT sector are educated and holds a professional degree, and only 14.3% of them are educated up till diploma level and 18.6% are master’s degree holder or higher. This shows that, although women are equally educated as men, the perceived cultural challenges defined in the objective of this study do exists among them.

**Table 4.3.7: Frequency by IT_Experience**

Frequency analysis done based on the IT experience among the female employee’s shows that 19.3% females have more than 10 years of experience in IT sector, 42.9% of them have more than 5 years of IT experience, and 37.9% who have less than 5 years of experience. Even this statistic second the perception that, as years passes female employees do move out of IT industry due to many reasons. This research is to identify if the reason for them to leave could be the challenges highlighted in the objective of this studies.

### 4.4 Correlation Analysis

The table below shows the correlation analysis result generated on all the variables to determine Pearson’s Correlation coefficients with 2-tailed signification test. Career progression of women in IT industry is challenged by Independent variables like Stereotype.
Stereotype (Stereotype_MEAN), Gender inequality (Gender_Inequality_MEAN), Gender gap in mentoring (Mentor_Gap_MEAN), Family-work life conflict (Family_Conflict_MEAN) and low self-esteem (Self_Esteem_MEAN). The correlation values show the influences of the above mentioned independent variables against the single dependent variable which is the career progress (Progress_MEAN). The result of correlation coefficients values are presented in table below. Jackson, S. (2009) defines a scale which can be used as guidance to interpretation of coefficient correlation values and its strength.

<table>
<thead>
<tr>
<th>Correlation</th>
<th>Strength of Relationship</th>
</tr>
</thead>
<tbody>
<tr>
<td>.00 - .10</td>
<td>Weak</td>
</tr>
<tr>
<td>.10 - .20</td>
<td>Moderate</td>
</tr>
<tr>
<td>.20 - .30</td>
<td>Strong</td>
</tr>
<tr>
<td>.30 - .40</td>
<td>Very Strong</td>
</tr>
<tr>
<td>.40 - .50</td>
<td>Strong</td>
</tr>
<tr>
<td>.50 - .60</td>
<td>Very Strong</td>
</tr>
<tr>
<td>.60 - .70</td>
<td>Strong</td>
</tr>
<tr>
<td>.70 - .80</td>
<td>Very Strong</td>
</tr>
<tr>
<td>.80 - .90</td>
<td>Strong</td>
</tr>
<tr>
<td>.90 - .95</td>
<td>Very Strong</td>
</tr>
<tr>
<td>.95 - 1.0</td>
<td>Strong</td>
</tr>
</tbody>
</table>

![Correlation coefficient scale](source.png)


Table 4.4.1: Pearson’s Correlation coefficient of challenges against women career progression in IT sector.

<table>
<thead>
<tr>
<th></th>
<th>Stereotype_MEAN</th>
<th>Gender_Inequality_MEAN</th>
<th>Family_Conflict_MEAN</th>
<th>Self_Esteem_MEAN</th>
<th>Mentor_Gap_MEAN</th>
<th>Progress_MEAN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stereotype_MEAN</td>
<td>1</td>
<td>.352**</td>
<td>.394**</td>
<td>- .382**</td>
<td>.673**</td>
<td>-.582**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>140</td>
<td>140</td>
<td>140</td>
<td>140</td>
<td>140</td>
<td>140</td>
</tr>
<tr>
<td>Gender_Inequality_MEAN</td>
<td>.382**</td>
<td>1</td>
<td>.927**</td>
<td>- .100**</td>
<td>.684**</td>
<td>-.758**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>140</td>
<td>140</td>
<td>140</td>
<td>140</td>
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<td>140</td>
</tr>
<tr>
<td>Family_Conflict_MEAN</td>
<td>.595**</td>
<td>.927**</td>
<td>1</td>
<td>- .937**</td>
<td>.518**</td>
<td>-.762**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>140</td>
<td>140</td>
<td>140</td>
<td>140</td>
<td>140</td>
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</tr>
<tr>
<td>Self_Esteem_MEAN</td>
<td>-.302**</td>
<td>-.927**</td>
<td>1</td>
<td>- .927**</td>
<td>.644**</td>
<td>-.702**</td>
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<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
<td>140</td>
<td>140</td>
<td>140</td>
<td>140</td>
<td>140</td>
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</tr>
<tr>
<td>Mentor_Gap_MEAN</td>
<td>.623**</td>
<td>.654**</td>
<td>.518**</td>
<td>-.664**</td>
<td>1</td>
<td>-.831**</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
</tr>
<tr>
<td>N</td>
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<td>140</td>
<td>140</td>
<td>140</td>
<td>140</td>
<td>140</td>
</tr>
<tr>
<td>Progress_MEAN</td>
<td>-.582**</td>
<td>-.758**</td>
<td>-.702**</td>
<td>.758**</td>
<td>-.831**</td>
<td>1</td>
</tr>
<tr>
<td>Sig. (2-tailed)</td>
<td></td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
<td>.000</td>
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<td>140</td>
<td>140</td>
<td>140</td>
<td>140</td>
<td>140</td>
</tr>
</tbody>
</table>

**. Correlation is significant at the 0.01 level (2-tailed).

In the definition of correlation coefficient, it describes the relationship between two variables (X) and (Y) and the value is always between -1 and 1. Few possible scenarios can be the result, where:

- **X=Y**: Perfect linear relationship between X and Y. When value to X increases, Y value increases exactly same amount. So, the correlation coefficient is exactly 1.
- **X = - Y**: So, the correlation coefficient is -1.
  X and Y are independent, the coefficient is equal to 0. This means that, there is no linear relationship between the variables.

The relationship between random variables cannot be explained or represented in an equality. Normally, there is various tendencies for variables to either track each other or move in opposite directions (Janke and Tinsley, 2005). The leanings may somehow be linear and the values of the correlation coefficient (r) ranges from -1 (negative linear) to 1 (positive linear).

For random variables X and Y, correlation coefficient range is between \(-1 \leq r \leq 1\). Significant (2-tailed) values generated tell us if there is a statistically significant correlation between the two
selected variables. For this study, the Sig(2-Tailed) value is 0.01, which means if the result is smaller than 0.01, then there is a significant relationship (correlation) between the two variables and vice versa. Apart from that, the value N represents the number of samples or populations involved in a study.

**H1: Cultural stereotype has a direct relationship and significant impact on women’s career progression.**

As per the correlation coefficient values generated from SPSS software with the data collected for this study, Cultural stereotype against women represented by variable, Stereotype has a correlation coefficient score of, \( r = -0.582 \) and significant (2-tailed) which is the \( p \) value of 0.000. The values measures three main characteristic of the relationship between the variable cultural stereotype and career progress.

![Graph](image)

*Graph 4.4.1: Scatterplot Stereotype_MEAN with Progress_MEAN*

If the relationship is statistically significant linear relationship: **Yes**

- Strength of the linear relationship: \( r = -0.582 \)
- The direction of the linear relationship: **negative linear relationship**

Correlation coefficient scale cited by Jackson, S. (2009) supports that, there is statistical evidence proves that there is a negative linear relationship between cultural stereotypes against women’s career progress. The correlation between these two variable is significant because the \( p \) value = 0.000 is < than 0.01. Correlation coefficient \( r = -0.582 \), indicates a moderate strength correlation but corresponds to a decreasing relationship. With this we can conclude that, people’s perception of the higher the cultural stereotype, the lower the career progress among the female employee's in the organization can be accepted. As supported by the literature, gender-based stereotypes are the typical barriers preventing women from moving up to senior position (Oakley, 2000). Besides that, as cited by 2003 Catalyst studies, preconceptions of women’s roles and capabilities, dedication and leadership style, lack of guidance and role models for women at the highest levels are among the stereotype which acts as a barrier for women progress in their career. This links well to the objective of this study which is to test if cultural stereotype against women exists in IT sectors in organization in Malaysia. Therefore, hypothesis number one (H1) is accepted in these studies.
**H2: Gender inequality has a direct relationship and significant impacts on women’s career progression.**

The next hypothesis to be tested in this study is the relationship of Gender inequality against the career progress of women in IT sector. As a result from the collected data, correlation coefficient generated by SPSS for the variable Gender inequality against career progress is, \( r = -0.758 \) and significant (2-tailed) value of, \( p=0.000 \).

If the relationship is statistically significant linear relationship: **Yes**  
Strength of the linear relationship: \( r = -0.758 \)  
The direction of the linear relationship: **negative linear relationship**

**Graph 4.4.2: Scatterplot Gender_inequality_MEAN with Progress_MEAN**

Based on the scale cited in Jackson, S. (2009), correlation coefficient value of, \( r = -0.758 \) shows there is a strong linear relationship between gender inequality and career progress of women and \( p \) value = 0.00 (<0.001) indicates there is a significant relationship between the variables. The negative sign shows that the relation is in reverse logic, where when the influences of gender inequality are high, the career progress will decrease. Some authors support that discrimination in hiring process occurs where employers assign women to lower-paying jobs delineated as “women’s work” (GREGORY, 2003). Gender discrimination laws apply to both men and women equally but women are often the victim (Gregory, 2003). Although there are many laws and acts in Malaysia to safeguard women’s rights when rights comes to women’s employment, maternity protection and social protection, the act of unfair treatment against women is still visible. SUHAKAM is a body which monitors the implementation of “Convention on the Elimination of All Forms of Discrimination against Women (CEDAW).” SUHAKAM has requested to government to amend the article 8 (2) the federal constitution of domestic laws in Malaysia to insert CEDAW as a part of it (SUHAKAM, 2010). Numerous authors have cited and supported the existence of gender inequality at work place work and this is conjunction with one of the objective of this study to determine if gender inequality is a barrier for women to progress in their career. Thus, hypothesis two (H2), is accepted in this research study.

**H3: Family work conflict has a direct relationship and significant impacts on women’s career progression.**
The third hypothesis of this research is to determine if family work life conflict does play a role as a barrier in women's career progress. The correlation coefficient value generated by SPSS statistic tool for family work life conflict is, \( r = -0.702 \) and significant (2-tailed) value is \( p=0.000 \).

If the relationship is statistically significant linear relationship: **Yes**
Strength of the linear relationship: \( r = -0.702 \)
The direction of the linear relationship: **negative linear relationship**

The correlation coefficient value for this variable of family work life conflict against career progress is strongly linear relationship and significant because the \( p \) value is below 0.05. These variables has a reverse relationship and there for the \( r \) value is negative. This seconds the perception that when family work life conflict increases among female employees, it impacts their career progress and there for the progress decreases. Many authors have cited that, women faces more family work life conflict compared to men because in an orthodox view women are expected to be the care taker of the household and childcare. Hardship falls greater upon the single mothers because for them they do not have an option to share the responsibilities or the burden with their partner. Most of the women struggle managing time between work and family commitments and it leads them to overlook at either one of it. Pregnancy discrimination is another phenomena occurs at some organization where pregnant women are treated less favorably (Deardorff and Dahl, 2015). Females lose their chances to grow in career when they are in companies which doesn’t practice maternity protection laws and perceive women employee as entity which causes extra cost such as paid maternity leave. Newell and Dopson (1996), found out from a survey that long working hours is a key factor of success in IT industries. Staying late in the office can be effective weapon for career success but female employees unable to fulfill this criteria due to family commitments. Mothers are perceived to be less motivated due to their family obligation (Voydanoff, 2004) and they are forced to choose between career and motherhood. This differs a little for childless women because they do not have the immediate family pressure. There for, based on the literature and the objective of this study, hypothesis number 3 (**H3**), is rational to be accepted.

**H4: Low self-esteem among women has a direct relationship and significant impacts on women’s career progression.**
The 4th hypothesis is to test the relationship between variables self-esteem against career progress and the correlation coefficient value recorded is $r = 0.758$ and the significant (2-tailed) value of $p = 0.000$.

*If the relationship is statistically significant linear relationship: Yes*

*Strength of the linear relationship: $r = 0.758$*

*The direction of the linear relationship: Positive linear relationship*

The correlation coefficient value of 0.758 indicates strong linear relationship and the relationship is significant because the p value is smaller than 0.05. Unlike other variables, self-esteem variables have a positive correlation sign, which means it’s a positive linear relationship. It means, when the self-esteem among the female employees increases, the career progress will also have hike and vice versa. From the research conducted, the result positively support the perception that low self-esteem among female employees is been a preventive factors for women to excel in their career life. 75.8% of the women respondent agree that they have low self-esteem although they are highly talented in their job. As for some cases, women are very passionate and confident about their job function but they are often criticized as over confident or being too bossy or dominant. These criticism pulls their confident level down thus demotivated them. Women aspiration level drop by half after a short period of time in duty especially for those are in IT sector because majority of the co-workers are men. These findings are in line with the objective of this study, which is to survey if low self-esteem exists within women in IT industry and there for, hypothesis number 4 (H4) is sensible to be accepted in this studies. Perception of low self-esteem is seems to be a challenge for women in IT sector.

**H5: Gender gap in mentoring has a direct relationship and significant impact on women’s career progression.**

The final hypothesis is to test the relationship between gender gap in mentoring against women’s career progress. From the data collected, the correlation coefficient value seems to be $r = -0.831$ and significant (2-tailed) is $p = 0.000$.

*If the relationship is statistically significant linear relationship: Yes*

*Strength of the linear relationship: $r = -0.831$*

*The direction of the linear relationship: negative linear relationship*
Again this is a negative linear relationship, which means when gender gap issue arises in mentoring among female employees, the career progress among female employees will be relatively slower. The correlation coefficient value of $r = -0.831$ is pretty strong and the relationship is also significant because the $p$ value is lesser than 0.005. Further adding to the evidence, being a female employee they expect for comfortable and conforming to gender expectations in providing support to mentees. Since the number of women's employees in IT sector decreases as they climb the corporate ladder (as supported by the literature), there are less senior mentees available to train the female new joiners. Less females in technology sector is not something new. As supported by the data collected from the questionnaire distribution, cross-gender mentoring is currently not happening or happening in very low rate among the employees at the moment. Thus, gender gap in mentoring is proven to be a perceived issue faced by the female employees in IT sector. Therefore, the last hypothesis ($H5$) is also accepted.
Table 4.4.2: Pearson's Correlation coefficient of challenges against women career progression in IT sector (additional findings).

Apart from the objective of the research, there are a few new correlation coefficient relationships identified from the data analysis of this thesis (as marked in the above table).

(1) **And (4) $r=0.295$**: There is a weak and significant (positive) relationship between family-work conflict and stereotype. Low stereotype will result in lower family-work life conflict, which is an acceptable fact. To further discuss on this, when women are not stereotyped or not under-represented, there will be more equal treatment. Therefore, family conflicts are less likely to happen and women have more space to focus and perform on their career progress.

(2) **And (3) $r=0.927$**: There is a strong and significant (positive) relationship between family-work conflict and gender inequality. It can be presumed that family-work life conflict increases, it impacts the gender inequality treat as well and vice versa. These two factors are highly correlated with each other. Perception exists that, unequal treatment towards women will be a reason for more family conflicts and therefore, work become unmanageable for most of the women.

(5) **And (6) $r=-0.927$**: There is a strong and significant (negative) relationship between self-esteem and family-work conflict. This correlation makes sense, because when family-work life conflict increases, the self-esteem of women will be impacted negatively and vice versa. Women who have high self-esteem and confident will be able to perform well in their career progress and know how to manage between family and work wisely. This is the key to avoid conflict between family and work life.

Table 4.4.3: Summary result after testing the hypotheses

As a summary of the correlation coefficient data analysis done in this study, all the independent variables correlate well with the objective of the study and have a significant relationship against the dependent variable. Therefore, all five hypotheses are tested and accepted for the objective of the study is achieved precisely.

5. **Conclusion**

The main objective of this study is to explore the perceived challenges faced by women to progress in career in IT Sector Malaysia. In conjunction with this objective, the five most common perceived challenges were identified and the result shows that gender gap in mentoring is the most common impact among Malaysian women, followed by low self-esteem,
gender inequality, family work life conflict and least was cultural stereotyping against women. All the perceived challenges are resulted to be having impacts on women career’s progress at certain level or strength. As an overall conclusion from this research, the entire five hypothesis (H1-5) are accepted and met the objective of the research conducted with their respective strength. All the five tested challenges are statically proven that each factor have direct relationship to women’s career progression rate in IT industry in Malaysia. Thus, all the five research questions defined in chapter 1 has been successfully answered. To further improve the current concerns in women labor force in IT sector in Malaysia, the government should absorb law and guideline like this to further enhance the current employment regulation which have for women in our country. In other countries like United States of America, special association called WOMEN BUREAU by U.S Department of Labor has established and monitor major laws and guidelines to protect women employment discrimination (www.dol.gov, 2016). Work or family is a terrible choice to make for any women. There for, corporate companies to should start investing on campus child care facilities at work place as a part of employee benefit. Working mothers can give their full commitment towards job without worry by putting their kids in employer sponsored child care. This will ensure women job engagement, quality of job, less retention, and thus more women will prefer to stay and work for IT sector. Google is one of the companies which provide campus child care known as “Googler kids” (fortune.com, 2013).

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